

Amendments to the Specification:

Page 5, lines 10 – 17, please replace the paragraph with the following amended paragraph:

In the subject invention, an improved scintillation detector assembly has been realized comprising: a cerium doped lutetium yttrium orthosilicate crystal; and, a photodetector, comprising a charge-coupled device, coupled to said crystal whereby an electrical signal is generated in response to a light pulse from said crystal when exposed to a high energy gamma ray. The crystal is preferably transparent, monocrystalline, and of a general composition of $\text{Ce}_{2x}(\text{Lu}_{1-y}\text{Y}_y)_{2(1-x)}\text{SiO}_5$ where $x = 0.00001$ to 0.02 and $y = 0.0001$ to 1.9999 , with a luminescence wavelength of approximately 420nm and a luminescence decay of approximately 35 to 45 ns, whereby the detector utilizing said crystal as the scintillator responsive to gamma and other similar high energy radiation is particularly useful in the fields of physics, chemistry, geology and cosmology.